

REMARKS

At the outset, Applicants wish to thank the Examiner for the courtesies extended to Applicants' undersigned representative during the telephonic interview of November 17, 2004. As agreed during the interview, the present amendment presents some of the points discussed during the interview.

In the Action, claims 1-17 are pending. Upon entry of the present Amendment, these claims remain pending, and claims 18-22 are added. Applicants respectfully submit that these new claims do not introduce new matter to the specification, as support may be found, among other places, in Figs. 1 and 2, and pages 3-6 of the specification.

In the Action, claims 2-5, 8, 9 and 11-13 stand objected to as being dependent upon a rejected claim, but are indicated to be allowable if rewritten in independent form. Claims 1, 6-7, 10 and 14-17 stand rejected under 35 U.S.C. 102(b) as being anticipated by *Fraidlin et al.* (U.S. Patent No. 6,038,142). Applicants respectfully traverse these grounds of rejection, especially insofar as they may be applied to the claims as amended.

Independent Claim 1 and Dependent Claims 2-9

Regarding independent claim 1, the Action alleges that each and every recited feature is shown in *Fraidlin et al.* The Action alleges that *Fraidlin et al.* discloses switch pairs (103/104) and (105/106), with switches 103 and 105 allegedly showing the claimed "high side" switches. Action, p. 2. The Action also alleges that *Fraidlin et al.*'s switch 115 shows the claimed "clamping circuit," and alleges that the transformer 110 shows the claimed "transformer." Action, p. 2.

Applicants' amended independent claim 1 recites, among other features, "a clamping circuit having a clamping capacitor and connected, for each switch pair, to a junction shared

by the clamping circuit, the high side switch, and the primary winding.” Applicants respectfully submit that *Fraidlin et al.* fails to teach or suggest a clamping circuit having a junction as recited. For example, the alleged clamping circuit 115, alleged high side switch 103/105 and alleged primary winding of transformer 110 do not share such a recited junction.

Amended independent claim 1 also recites “a control circuit having inputs based on the output voltage and the input current and configured to generate outputs controlling the switch pairs and the clamping circuit.” The Action identifies *Fraidlin et al.*’s PWM controller 124 to show “a control circuit having inputs (through 123) based on the output voltage and the input current (at 125) ...” Action, p. 3. As discussed during the interview, the *Fraidlin et al.* monitoring circuit 125 detects when “the voltage across the switches in the full-bridge reaches zero,” and provides an indication when this occurs *Fraidlin et al.*, col. 3, lines 40-42. The *Fraidlin et al.* PWM controller 124 monitors a zero-voltage condition, and does not include “a control circuit having inputs based on the output voltage and the input current ...,” as recited in amended independent claim 1.

Applicants respectfully submit that amended independent claim 1 distinguishes over the art of record, and is in condition for allowance. Claims 2-9 depend from claim 1, and are allowable at least for the same reasons as claim 1, and further in view of the various novel and advantageous features recited therein. Indeed, the Action indicates that claims 2-5 and 8-9 would be allowable if rewritten in independent form.

Independent Claim 10 and Dependent Claims 11-17

Independent claim 10 recites, among other features, the following:

a control circuit having inputs based on the output voltage and the input current, configured to generate switch network control signals based on the inputs, and configured to generate

clamping circuit control signals based on the switch network control signals.

The Action relies entirely on *Fraidlin et al.* to reject claim 10, citing the same analysis provided with respect to claim 1. As noted above, the *Fraidlin et al.* monitoring circuit 125 detects a zero voltage condition, and does not include “a control circuit having inputs based on the output voltage and the input current,” as recited (among other features) in claim 10.

Applicants respectfully submit that independent claim 10 distinguishes over the art of record, and is in condition for allowance. Claims 11-17 depend from claim 10, and are allowable at least for the same reasons as claim 10, and further in view of the various novel and advantageous features recited therein. Indeed, the Action indicates that claims 11-13 would be allowable if rewritten in independent form.

Independent Claim 18 and Dependent Claims 19-22

New claims 18-22 recite novel and advantageous features that are not shown in the art of record. For example, new independent claim 18 recites the following:

a clamping circuit, connected to said switch network and said transformer, wherein said clamping circuit has direct electrical connections to opposite ends of a primary winding of said transformer; and

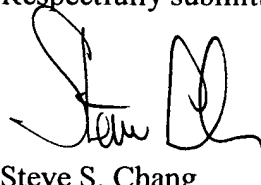
a control circuit configured to provide switch network control signals, said signals being based at least in part on said input current.

Applicants respectfully submit that the art of record fails to teach or suggest a power converter as recited in claim 18. Claims 19-22 depend from claim 18, and are allowable for at least the same reasons as claim 18, and further in view of the various advantageous and novel features recited therein. For example, claim 22 recites "[t]he power converter of claim 18, wherein said clamping circuit includes first and second clamping switches connected to first and second ends, respectively, of said primary winding." The art of record does not teach or suggest such a power converter.

Conclusion

For at least these reasons, Applicants submit that pending claims 1-22 distinguish over the art of record, and are in condition for allowance. Should the Examiner feel that additional discussion and/or amendment would be desirable, the Examiner is invited to telephone Applicants' undersigned representative at the number appearing below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Steve S. Chang", with a stylized flourish at the end.

Steve S. Chang
Registration No. 42,402

BANNER & WITCOFF, LTD.
1001 G Street, N.W., 11th Floor
Washington, DC 20001-4597
(202) 824-3000

Date: December 22, 2004